KEI-P88-1110.QR3 February 28, 1994

Berkeley Land Company 4550 San Pablo Avenue Emeryville, CA 94608

Attention: Mr. Norm Alberts

RE: Quarterly Report
Berkeley Land Company
23555 Saklan Road
Hayward, California

Dear Mr. Alberts:

RAPREALIAN ENGINEERING

Robert H. Kezerian, P.E.
Project Manager

2401 Stanwell Drive, Sunte 400
Concord, Calufornia 94520
Tel. 510 602 5100
Fax: 510.687 0602

This report presents the results of the most recent quarter of monitoring and sampling of the monitoring wells at the referenced site by Kaprealian Engineering, Inc. (KEI). All of the wells are currently monitored monthly and sampled on a quarterly basis. This report covers the work performed by KEI from November of 1993 through January of 1994.

BACKGROUND

The subject site occupies the northeast corner of the intersection of Saklan Road and Middle Lane in Hayward, California, and is situated approximately two miles from the shores of the San Francisco Bay. The site is located in a mixed light industrial and residential area. A Location Map is attached to this report. A large part of the site is used by Quality Tow, an automobile towing operation, for the storage of used vehicles.

In June of 1988, an underground fuel storage tank was reportedly removed from the site. On February 27, 1990, and March 1, 1990, two exploratory borings were drilled at the site. During the drilling of the borings, a six-inch diameter water well was discovered adjacent to the former underground fuel storage tank pit. On May 30, 1990, four exploratory borings were drilled and five monitoring wells installed at the site. KEI's initial work at the site was conducted on February 25, 1993, when the five existing monitoring wells were monitored and sampled. On June 1 and 2, 1993, seven exploratory borings, in conjunction with a Hydropunch study, were drilled at the site. A total of 13 borings have been drilled and five monitoring wells have been installed at the site.

A site description, detailed background information including a summary of all of the soil and ground water subsurface investiga-

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tion/remediation work conducted to date, site hydrogeologic conditions, and tables that summarize all of the soil and ground water sample analytical results are presented in KEI's report (KEI-P88-1110.R2) dated July 12, 1993.

RECENT FIELD ACTIVITIES

The five monitoring wells (MW1 through MW5) and the water well (WW1) were monitored three times and were sampled once during the quarter. The water well was also purged of a total of 12 ounces of product during the quarter. During monitoring, the wells were checked for depth to water and the presence of free product. Prior to sampling, the wells were also checked for the presence of a sheen. No free product or sheen was noted in any of the wells during the quarter, except for free product noted in the water well once. The monitoring data collected this quarter are summarized in Table 1.

Ground water samples were collected from all of the wells on January 20, 1994. Prior to sampling, the wells were each purged of between 20 and 90 gallons of water by the use of a surface pump. The samples were collected by the use of a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflonlined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

HYDROLOGY

The measured depth to ground water at the site on January 20, 1994, ranged between 12.78 and 14.81 feet. The water levels in all of the wells have shown net increases ranging from 0.14 to 0.21 feet since October 28, 1993. Based on the water level data gathered during the quarter, the ground water flow direction appeared to be predominantly to the west-southwest, as shown on the attached Potentiometric Surface Maps, Figures 1, 2, and 3. The ground water flow direction has been predominantly to the southwest since the inception of the monitoring program in May of 1993 (three consecutive quarters). The average hydraulic gradient at the site on January 20, 1994, was approximately 0.003.

ANALYTICAL RESULTS

The ground water samples collected this quarter were analyzed at Sequoia Analytical Laboratory and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030/modified 8015, TPH as diesel by EPA method 3510/modified 8015,

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and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8020.

The analytical results of all of the ground water samples collected from the wells to date are summarized in Table 2. The concentrations of TPH as gasoline, benzene, and TPH as diesel detected in the ground water samples collected this quarter are shown on the attached Figure 4. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

DISCUSSION

Based on the analytical results of the soil and ground water samples collected and evaluated to date, KEI recommends the continuation of the current ground water monitoring and sampling program. The five monitoring wells and the water well are currently monitored monthly and sampled on a quarterly basis. Ground water samples collected from the wells are analyzed for TPH as gasoline, TPH as diesel, and BTEX.

Free product had previously been consistently detected in the water well. KEI therefore installed a continuous, surface skimming, free product recovery device in the well. The skimmer is designed to continuously collect any free product present. Any free product collected is removed during the monthly monitoring events. A total of 12 ounces of free product were collected by the skimmer during the previous quarter. However, during the two most recent monitoring events, no free product was detected in the water well.

DISTRIBUTION

A copy of this report should be sent to the Alameda County Health Care Services Agency, and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this study are based on the data obtained from the field and laboratory analyses obtained from a state-certified laboratory. We have analyzed these data using what we believe to

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be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

If you have any questions regarding this report, please do not hesitate to call at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

To Vis Softomarian

Sarkis A. Soghomonian

Staff Engineer

Joel G. Greger, C.E.G.

Senior Engineering Geologist

License No. EG 1633 Exp. Date 6/30/94

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Robert H. Kezerian Project Manager

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Attachments:

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Tables 1 & 2 Location Map

Potentiometric Surface Maps - Figures 1, 2 & 3 Concentrations of Petroleum Hydrocarbons - Figure 4

Laboratory Analyses

Chain of Custody documentation

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TABLE 1
SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet) (Monito	Depth to Water (feet) • red and Sa	Product Thickness (feet) mpled on Ja	Sheen .nuary 2	Water Purged (gallons) 0, 1994)	Product Purged (ounces)
MW1	19.34	14.42	0	No	28	0
MW2	19.72	14.61	0	No	32	Ö
MW3	19.30	14.33	Ö	No	20	Ö
MW4	19.22	12.78	0	Ио	55	Ö
MW5	19.55	13.09	0	No	24	Ō
WW1	N/A	14.81	0	No	90	Ö
MW1 MW2 MW3 MW4 MW5 WW1	19.25 19.64 19.27 19.19 19.50 N/A	Monitored 14.51 14.69 14.36 12.81 13.14 14.86	O December 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13, 19 No	93) 0 0 0 0 0	0 0 0 0 0 0 2+
	(Monitored (on November	16, 19	93)	
MW1	19.09	14.67	0		o	0
MW2	19,45	14.88	0		0	0
KWM3	19.07	14.56	0		0	Ö
MW4	18.98	13.02	0	***	0	0
MW5	19,30	13.34	0		0	Ö
WW1	N/A	15.02	0.30	N/A	0	10+

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TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Top of Casing Elevation in feet above <u>Mean Sea Level (MSL)*</u>
MW1	33.76
MW2	34.33
MW3	33.63
MW4	32.00
MW5	32.64

N/A = Not applicable.

- -- Sheen determination was not performed.
- * Based on Alameda County Benchmark located at Eden Avenue and West Street (elevation = 33.16 MSL).
- ↑ The depth to water level measurement was taken from the top of the well casing. Prior to September 2, 1993, the water level measurement was taken from the top of the well cover.
- + Product was collected from the skimmer.

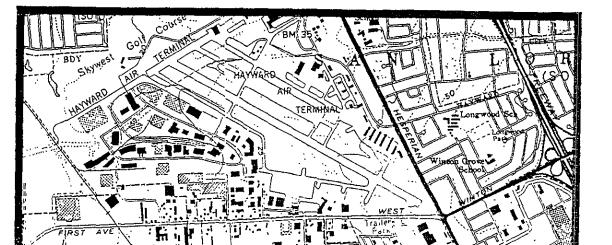
TABLE 2
SUMMARY OF LABORATORY ANALYSES
WATER

<u>Date</u>	Sample Well #	TPH as <u>Diesel</u>	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Ethyl- <u>benzene</u>	Xylenes
1/20/94	MW1	73	ND	ND	ND	ND	ND
	MW2	ND	ND	ИD	ND	ND	ND
	KW3	130	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND	ND
	MW5	340♦	ND	ND	ND	ND	ND
	WW1	190,000	34,000*	ND	ИD	ND	ND
10/28/93	MW1	120+	200*	1.8	ND	ND	ND
	MW2	ND	ИD	ND	ND	ND	ND
	MW3	170	ND	ND	ND	ND	1.4
	MW4	ND	ИД	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND
7/12/93+	MW1	200♦	150	1.1	ND	ND	0.51
&	MW2	ND	ND	ND	ND	ND	ND
8/20/93	EWM	ИD	ИD	ИD	ND	ND	ИD
	MW4	ND	ND	ND	ND	ND	ND
	MW5	ИD	ND	ND	ND	ND	ND
2/25/93	MW1	5,900♦	4,600**	45	18	ND	750
	MW2	ND	ND	ND	ND	ND	ND
	MW3	200	ND	ИD	ND	ND	ND
	MW4	ИD	ИП	ND	ND	ND	ND
	MW5	ND	ND	ИD	ND	ND	ND

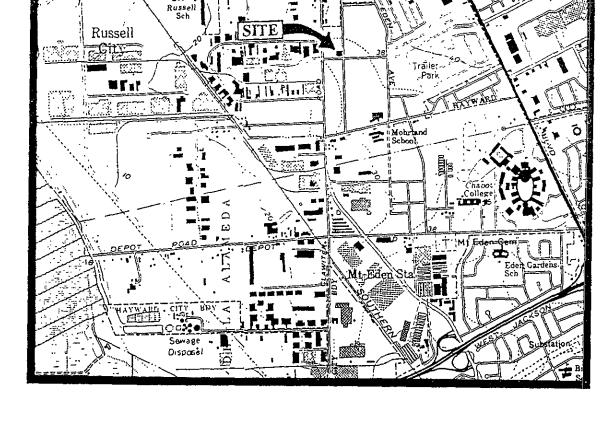
- + Samples collected on July 12, 1993, were analyzed for TPH as gasoline and BTEX. Samples collected on August 20, 1993, were analyzed for TPH as diesel.
- Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- * Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.
- ** Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

ND = Non-detectable.

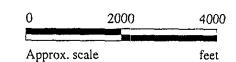
Results are in parts per billion (ppb), unless otherwise indicated.







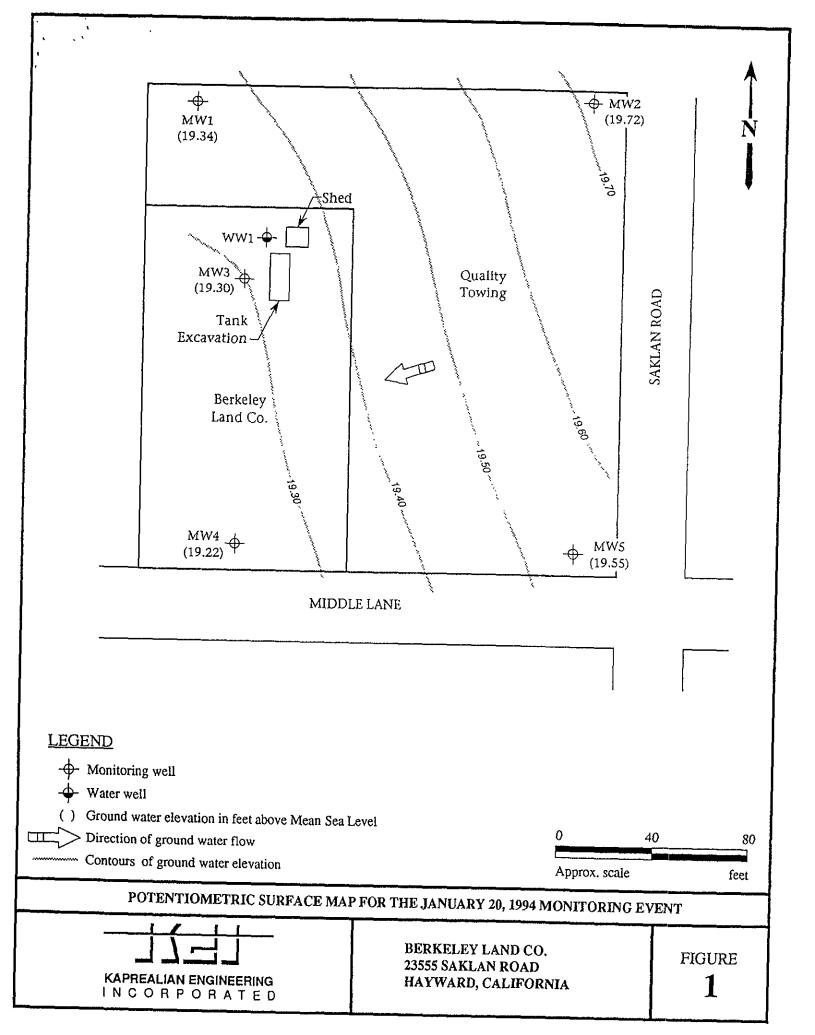
Base modified from 7.5 minute U.S.G.S. Hayward & San Leandro Quadrangles (both photorevised 1980)

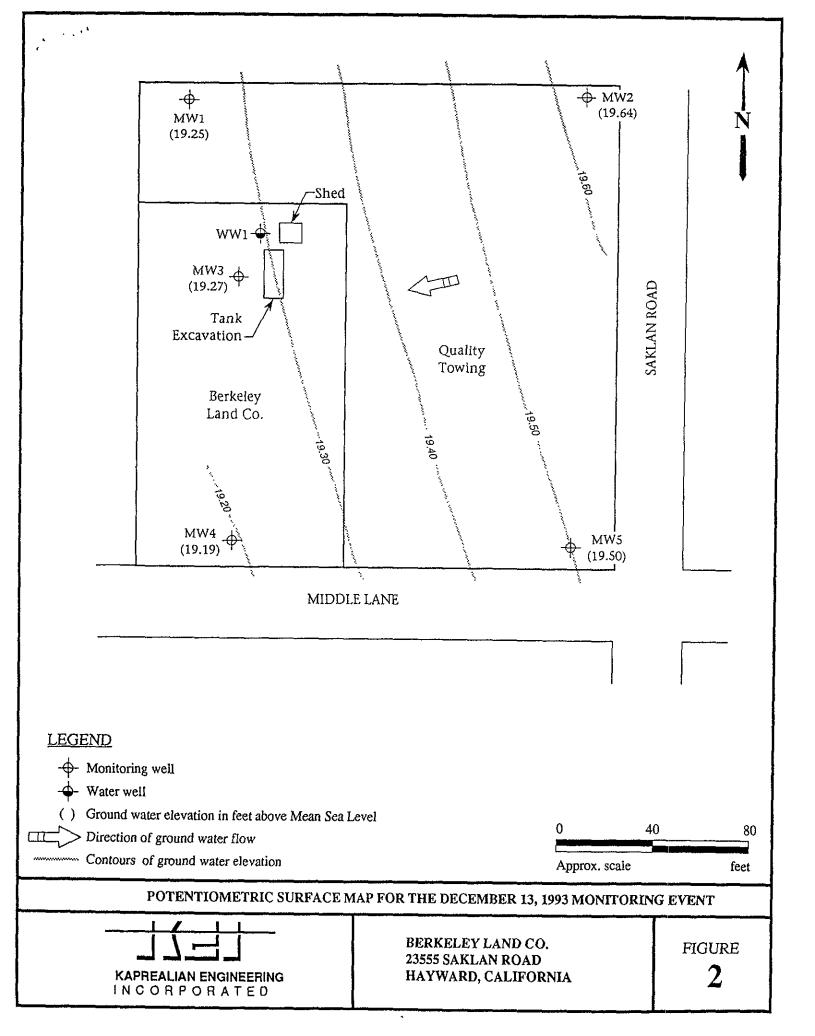


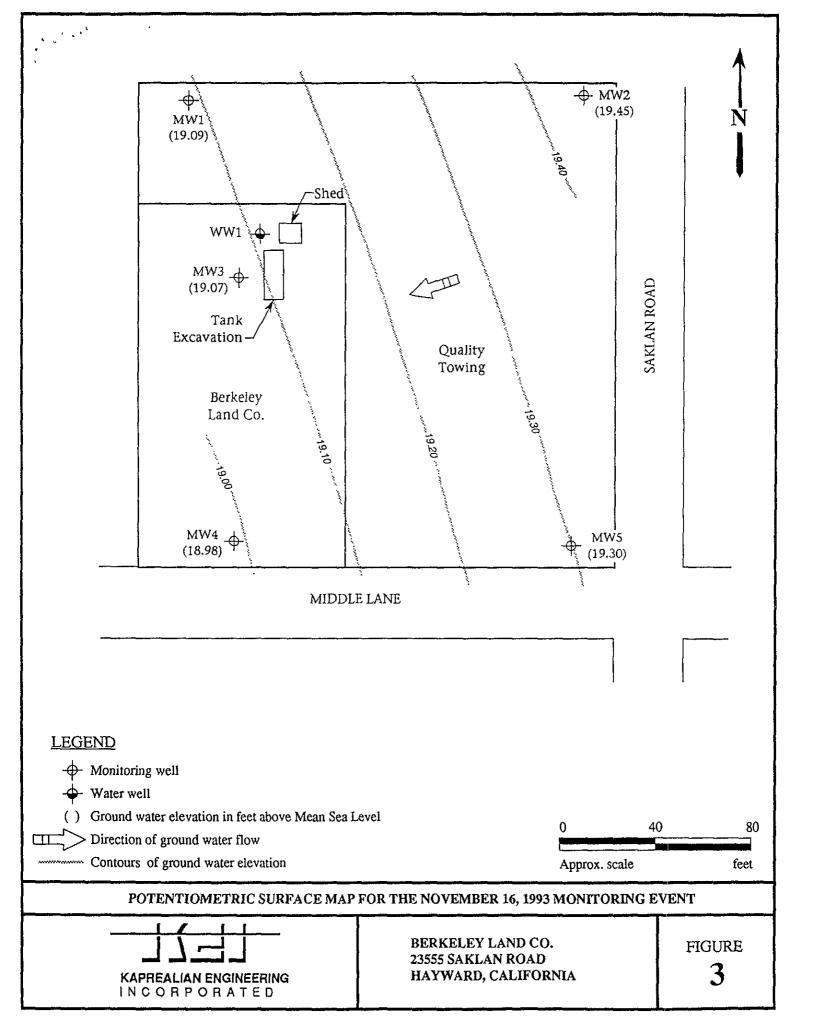


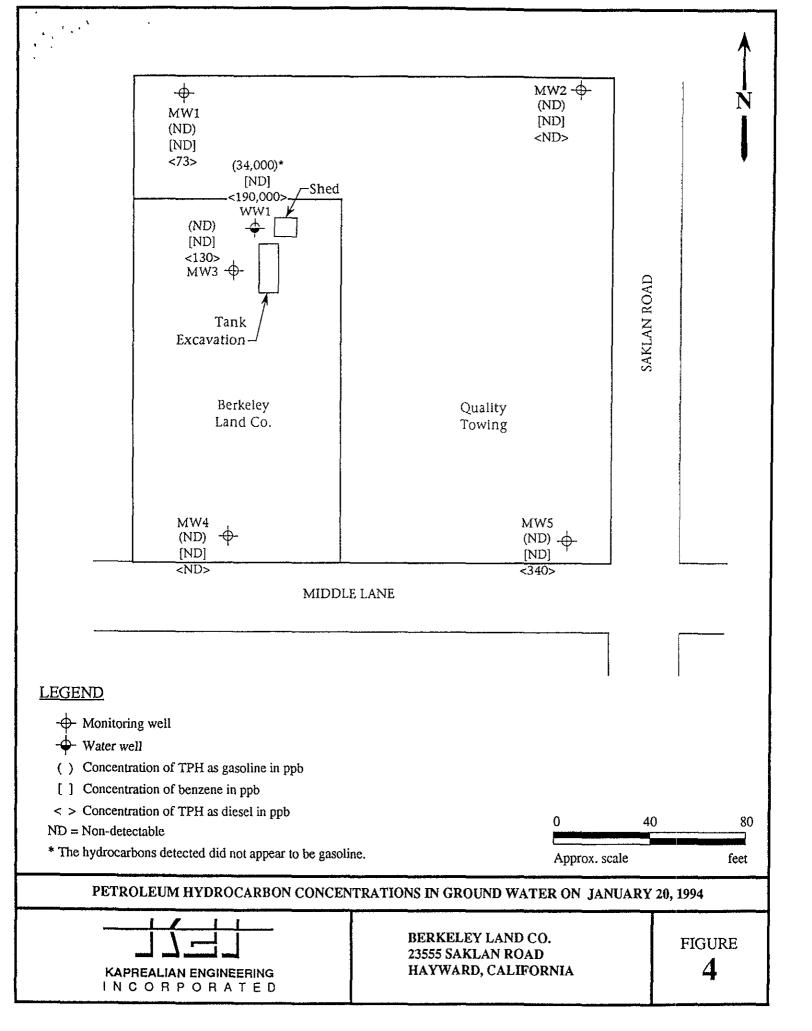
BERKELEY LAND CO. 23555 SAKLAN ROAD HAYWARD, CALIFORNIA

LOCATION MAP









Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520

Client Project ID: Sample Matrix: Analysis Method: Berkeley Farms, 23555 Saklan Rd., Hayward

Water

Sampled: Received: Jan 20, 1994 Jan 21, 1994

Attention: Avo Avedissian Senara 1990 roka etakentaria kare First Sample #:

EPA 5030/8015/8020 401-0916

Reported:

Feb 7, 1994

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit μg/L	Sample I.D. 401-0916 MW-1	Sample I.D. 401-0917 MW-2	Sample I.D. 401-0918 MW-3	Sample I.D. 401-0919 MW-4	Sample I.D. 401-0920 MW-5	Sample I.D. 401-0921 WW-1
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.	N.D.	34,000
Benzene .	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pat	tern:						Non-Gasoline Mixture >C10

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	400
Date Analyzed:	1/26/94	1/26/94	1/26/94	1/26/94	1/26/94	1/26/94
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	109	106	108	105	104	102

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Project Manager

2401 Stanwell Dr., Ste. 400 Concord, CA 94520

Sample Matrix:

Kaprealian Engineering, Inc. Client Project ID: Berkeley Farms, 23555 Saklan Rd., Hayward Water

Sampled:

Received:

Reported: Feb 7, 1994

Attention: Avo Avedissian

Analysis Method:

EPA 5030/8015/8020

Method Blank

First Sample #: KELIK EPRO DERIG DER EUTE EINE ERREITEREN KERTEREN KERRITER KAN BETER DER KERRITERE DER ALLE GERE DER GERE

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit μg/L	Sample I.D. Method Blank		
Purgeable Hydrocarbons	50			
Benzene	0.5			
Toluene ·	0.5			
Ethyl Benzene	0.5			
Total Xylenes	0.5			
Chromatogram Patter	'n '			

Chromatogram Pattern:

Quality Control Data

Report Limit Multiplication Factor:

1.0

Date Analyzed:

1/26/94

Instrument Identification:

HP-2

Surrogate Recovery, %:

(QC Limits = 70-130%)

110

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Project Manager

Kaprealian Engineering, Inc. Client Project ID: 2401 Stanwell Dr., Ste. 400 Concord, CA 94520

Attention: Avo Avedissian

Sample Matrix:

Water

Berkeley Farms, 23555 Saklan Rd., Hayward

Sampled: Received: Jan 20, 1994 Jan 21, 1994

Analysis Method: First Sample #:

EPA 3510/3520/8015 401-0916

Reported:

Feb 7, 1994

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit μg/L	Sample I.D. 401-0916 MW-1	Sample I.D. 401-0917 MW-2	Sample I.D. 401-0918 MW-3	Sample I.D. 401-0919 MW-4	Sample I.D. 401-0920 MW-5	Sample I.D. 401-0921 WW1
Extractable Hydrocarbons	50	73	N.D.	130	N.D.	340	190,000
Chromatogram Pa	ttern:	Diesel	••	Diesel		Diesel and Non-Diesel Mixture > C20	Diesel

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	100
Date Extracted:	1/25/94	1/25/94	1/25/94	1/25/94	1/25/94	1/25/94
Date Analyzed:	1/27/94	1/27/94	1/27/94	1/27/94	1/27/94	1/31/94
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Project Manager

Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520

Client Project ID: Sample Matrix:

Berkeley Farms, 23555 Saklan Rd., Hayward

Sampled: --

Analysis Method:

Water EPA 3510/3520/8015 Received:

Reported:

Feb 7, 1994

Attention: Avo Avedissian Balleren biralindamant barallasahaltak B

First Sample #: Method Blank

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit	Sample I.D.	
·	μg/L	Method Blank	

Extractable Hydrocarbons

50

Chromatogram Pattern:

Quality Control Data

Report Limit Multiplication Factor:

1.0

Date Extracted:

1/25/94

Date Analyzed:

1/31/94

Instrument Identification:

HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Alan B. Kemp Project Manager Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520

Matrix:

Berkeley Farms, 23555 Saklan Rd., Hayward

Liquid'

Attention: Avo Avedissian

QC Sample Group: 4010916-21 THE POPULATION OF A CONTROL OF

Client Project ID:

Reported:

Feb 7, 19943

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	 ,
Method: Analyst:	EPA 8020 J. Fontecha	EPA 8020 J. Fontecha	EPA 8020 J. Fontecha	EPA 8020 J. Fontecha	EPA 8015 K. Wimer	
MS/MSD Batch#:	4010920	4010920	4010920	4010920	BLK012594	
Date Prepared: Date Analyzed: Instrument I.D.#: Conc. Spiked:	1/26/94 1/26/94 HP-2 20 µg/L	1/26/94 1/26/94 HP-2 20 µg/L	1/26/94 1/26/94 HP-2 20 µg/L	1/26/94 1/26/94 HP-2 60 µg/L	1/25/94 1/31/94 HP-3B 300 µg/L	•
Matrix Spike % Recovery:	115	110	110	113	84	
Matrix Spike Duplicate % Recovery:	110	105	110	110	86	
Relative % Difference:	4.4	4.6	0.0	2.7	3.1	

LCS Batch#:	1LCS012694	1LCS012694	1LCS012694	1LCS012694	BLK012594	
Date Prepared:	1/26/94	1/26/94	1/26/94	1/26/94	1/25/94	
Date Analyzed:	1/26/94	1/26/94	1/26/94	1/26/94	1/31/94	
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B	
LCS %						
Recovery:	98	95	94	96	84	
% Recovery						
Control Limits:	71-133	72-128	72-130	71-120	28-122	•

SEQUOIA ANALYTICAL

Kèmp Project Manager Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Kapreallan Engineering, Inc. 2401 Stanwell Dr., Ste. 400

Client Project ID: Berkeley Farms, 23555 Saklan Rd., Hayward

Concord, CA 94520

Attention: Avo Avedissian

QC Sample Group: 4010916-21 Para Marana Parana Marana da Marana Bana Marana Ma Marana Maran

Reported:

Feb 7, 1994.

QUALITY CONTROL DATA REPORT

SURROGATE				-			
Method: Analyst: Reporting Units: Date Analyzed: Sample #:	EPA 8015 K. Wimer µg/L 1/27/94 401-0916	EPA 8015 K. Wimer μg/L 1/27/94 401-0917	EPA 8015 K. Wimer μg/L 1/27/94 401-0918	EPA 8015 K. Wimer µg/L 1/27/94 401-0919	EPA 8015 K. Wimer µg/L 1/27/94 401-0920	EPA 8015 K. Wimer μg/L 1/31/94 401-0921	EPA 8015 K. Wimer μg/L 1/31/94 Method Blank
							·
Surrogate % Recovery:	93	90	95	106	101	753	113

SEQUOIA ANALYTICAL

Kemp Project Managér

% Recovery: Conc. of M.S. - Conc. of Sample x 100 Spike Conc. Added Relative % Difference: Conc. of M.S. - Conc. of M.S.D. x 100 (Conc. of M.S. + Conc. of M.S.D.) / 2

KAPREALIAN ENGINEERING INCORPORATED

CHAIN OF CUSTODY

SAMPLER				SITE NAME & ADDRESS							HALYSE	S REQU	ESTED	TURN AROUND TIME:		
WITHESSING AGENCY				355 355	100 55 24	رو چ سے ہ	-7 d 20 0 20 0	form 3 (an 80).	9	メボ	0	İ			Regular	
SAHPLE 10 NO.	DATE	TIME		WATER			NO. OF	SAMPLING LOCATION	TP.H	077	TOT				REMARKS	
mas!	1-20-90	(5:30		V			3		V	V	V				4010916 A-C	
MWZ	"	14:30		0			3		V	V	V				1 0917	
MW3	١,(07:31		0			3		~	V	~				0918	
MOL	((14:45		~			3		V	1/	0				0919	
MWS	1.1	14:55		~			3		0	0	/				0920	
IWW	11	15:45		V			3		V	V	V				1 0921	
Relinquiched by: (Signature)			1/2	Pate/Ti	165	Q	4			The following MUST BE completed by the laboratory accepting sampl for analysis: 1. Have all samples received for analysis been stored in ice?						
Relinguished by: (Signature) Relinquished by: (Signature)				Date/Time			Received by: (Signature) Received by: (Signature)			3. 0	Will samples remain refrigerated until analyzed? Did any samples received for analysis have head space? Were samples in appropriate containers and properly packaged?					
Relinquished by: (Signature)			C	Date/Time			Receiv	red by: (Signature)		7. P	Signature Title Vate					